Name: Date: Period:

**Mitosis Unit**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the most important cell activity.

2. Why?

* Cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ out and need \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells allow the body to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ damaged tissue
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells allow the body to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. How does a cell make more cells? Depends if the cell is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Prokaryotic cell = **binary fission** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into \_\_\_\_\_ parts

5. Eukaryotic cell = **mitosis** – cell \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in which \_\_\_\_\_ new \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cells are formed with the exact same number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as the

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cell

6. **parent cell** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cell

7. **daughter cell** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cell \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cyclic process of mitosis:

1. **interphase** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ before mitosis begins; cell \_\_\_\_\_\_\_\_\_\_\_\_\_

and genetic material is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **prophase** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ coil up; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

membrane disappears; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ joined at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **metaphase** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ line up in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;

chromosomes attach to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **anaphase** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ split apart; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ move to

opposite ends

1. **telophase** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ membrane reappears; 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

cells are formed

1. **cytokinesis** -- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ divides; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ distributed

into new \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and THEN back to letter A

8. The difference in mitosis between plant and animal cells is that there is a

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in plant cells.

9. **cancer** – uncontrolled \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: Date: Period:

**Mitosis Unit KEY**

1. Cell division is the most important cell activity.

2. Why?

* Cells wear out and need repair
* New cells allow the body to replace damaged tissue
* New cells allow the body to grow

3. How does a cell make more cells? Depends if the cell is prokaryotic or eukaryotic

4. Prokaryotic cell = **binary fission** -- splitting into 2 parts

5. Eukaryotic cell = **mitosis** – cell division in which 2 new daughter cells are formed with the exact same number of chromosomes as the parent cell

6. **parent cell** -- original cell

7. **daughter cell** -- new cell formed

Cyclic process of mitosis:

1. **interphase** -- time before mitosis begins; cell grows and genetic material is copied
2. **prophase** -- chromatids coil up; nuclear membrane disappears; chromatids joined at centromere
3. **metaphase** -- chromosomes line up in the middle; chromosomes attach to spindle bundle at the centromere
4. **anaphase** -- chromosomes split apart; chromosomes move to opposite ends
5. **telophase** -- nuclear membrane reappears; 2 daughter cells are formed
6. **cytokinesis** -- cytoplasm divides; organelles distributed into new cells and THEN back to letter G

8. The difference in mitosis between plant and animal cells is that there is a cell plate in plant cells.

9. **cancer** – uncontrolled mitosis